

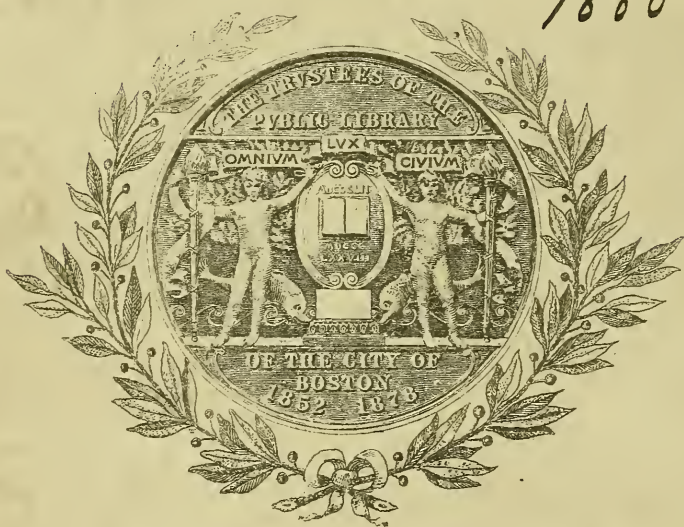
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ANNUAL REPORT

OF THE

INSPECTOR OF BUILDINGS,

For the year 1880.

DEPARTMENT FOR THE SURVEY AND INSPECTION OF
BUILDINGS.

OFFICE OF THE INSPECTOR OF BUILDINGS,
CITY HALL, January 1, 1881.

To the Honorable the City Council of the City of Boston:—

GENTLEMEN, — In compliance with the provisions of Section 7 of Chapter 280 of the Laws of 1871, I have the honor to submit for your consideration a detailed report of the operations of this department for the year ending December 31, 1880.

Very respectfully I am your obedient servant,

JOHN S. DAMRELL,

Inspector of Buildings.

Under the provisions of the statutes relating to buildings in the City of Boston, and under the provisions of the city ordinances relating to buildings, the department has supervision over the following matters:—

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The erection of brick, stone, and iron buildings, under statute provisions, throughout the entire city limits.

The erection of wooden or frame buildings of limited dimensions and range, outside of the building limits, under the provisions of the city ordinance.

Additions, alterations, and repairs upon all classes of buildings, with especial reference to their compliance with the present requirements of the building law.

The inspection of unsafe buildings and structures, with full power to require the securing or removal of the same, and in cases of immediate danger, where the security of the public is imperilled in life and limb, authority to enter upon, secure, or take down the same, as the exigences of the public safety, in the opinion of the Inspector, may require.

The examination of buildings damaged by fire or accident, with authority to enter upon the premises and investigate the origin of fires.

The inspection of buildings liable to take fire from unsafe flues and heating apparatus.

The supervision and the protection of the building limits; the district in which the erection of independent wooden buildings is prohibited by statute law, with a limitation as to wharves.

Special authority invested in the Inspector of Buildings to issue permits for wooden and frame sheds, for special purposes, at his discretion, upon wharves situated within the building limits of the city.

The examination for the approval of plans of proposed tenement-houses, public and family hotels, with reference to their compliance with special statute provisions, regulating area for light and ventilation, material of construction, water-closets, drainage, cesspools, height of habitable rooms, window openings, hall-ways, construction of stairways, fire-escapes, and the height of the building as regulated by the width of the street upon which they are proposed to be erected.

The enforcement of statutory provisions requiring fire-escapes upon certain buildings in which operatives are employed, in factories, mills, or manufactories, tenement-houses, and hotels, etc.

Authority invested in the Inspector of Buildings, under the act relating to means of egress from buildings occupied for public purposes, to regulate the entrances, doorways, passage-ways, their width, construction, and number, and obstructions that may be placed therein, the

arrangement of the seatings, and the use of combustible materials, draperies, scenery, properties, etc.

The inspection of all hoist-way and elevator openings in buildings, with reference to their construction in conformity with the requirements of statute law and their use.

Compliance with the requisitions of the Board of Health.

The setting of steam-engines and boilers.

The building of furnaces for melting iron, glass, or other metals.

The building of ovens, kilns, etc.

The setting of heating apparatus in all classes of buildings.

The examination of the grade of cellar bottoms of buildings built upon filled land; reporting violations of the same to the Board of Aldermen.

The storage of combustible material in buildings occupied in whole or in part as dwellings, situated within the building limits of the city.

Buildings authorized by the Board of Aldermen to be used for stables are licensed to be occupied for this purpose, under the direction of the Inspector of Buildings.

The examination of buildings, with reference to their being provided with ample and sufficient means of egress, and their compliance with statute requirements, upon petition for license to occupy the same as a place of public amusement.

Examination of private signs located in the public highways, upon a petition to the Board of Aldermen to maintain the same, if secured satisfactory to the Inspector of Buildings.

Authority to apply to the Supreme Judicial Court for an injunction restraining the construction of windows, steps, and porches, projecting into or over any public highway.

It is with pleasure and satisfaction that the department is enabled to note the increased confidence and business energy, and a healthy return to investments in real estate. This has been most marked during the past year. The erection of large and commodious warehouses in all sections of our city, as well as the extensive alterations that have been going on to make room for increased business operations, together with the erection of a large number of palatial residences have been, in a point of construction, of the most satisfactory character:

The department the past year has been one of constant activity, and, owing to the methods employed for the trans-

action of its work; the office has been used largely as a consultation bureau by our capitalists, architects, and master builders, in order that the law should be fully met. This has been very gratifying, while, by the methods adopted, the full maximum of work has been accomplished, yet the violations of the law reported have decreased fully 50 per cent.

Examinations of buildings, structures, etc., have to be made in all cases previous to issuing requisitions, permits, or notices; a diagram, and full description recorded of same; then examinations during their construction or alteration; a third examination, at its completion, as the final report, with the costs and facts in the case.

The department has given much care and attention to so much of the Mayor's address as related to an alteration and revision of the laws relating to the survey and inspection of buildings. Several meetings have been held on this matter, at which the committee on this department, together with many of our able architects and master-builders, were present, and considered the different proposed amendments submitted, and were unanimous in recommending the same to the Legislature (with a few exceptions) for approval.

The following shows the operations of the department in detail, and a comparative statement from its organization up to date:—

THE OPERATIONS OF THE DEPARTMENT.

The number of brick, stone, and iron buildings for which permits have been issued during the year	309
The number of wooden buildings for which permits have been issued during the year	494
The number of sheds situated upon wharves within the building limits of the city for which permits have been issued	9
The number of buildings for which permits have been issued to have additions built to them, or to have alterations and repairs made upon them	2,294
The number of steam-boilers, engines, etc., for which permits have been issued to set	203
The number of ovens, ranges, etc., for which permits have been issued to build	34
The number of kilns, kettles, etc., for which permits have been issued to build	40
The number of furnaces, etc., for which permits have been issued to build	82

The number of notices received of intentions to put in heating apparatus	470
The number of lanterns, street-signs, and transparencies examined	21
The number of public halls examined with reference to granting a license to occupy the same	1
The number of buildings upon which reports have been made with reference to fire-escapes and means of egress	551
The number of buildings examined that were damaged by fire	352
The number of elevators and hoist-ways examined	96
The number of permits issued to occupy streets for building purposes	1,284
The number of buildings, walls, etc., reported to be in an unsafe condition	153
The number of chimneys reported unsafe	249
The number of defective flues	25
The number of unsafe heating apparatus	88
The number of buildings reported as being deficient in means of egress and fire-escapes	115
The number of violations reported	507
The number of cases referred to the City Solicitor	9
The number of brick buildings completed during year	159
The number of wooden and frame buildings completed	273
The number of buildings upon which additions, alterations, and repairs have been completed during the year	2,198
The number of steam-boilers, engines, etc., set, and furnaces, ovens, ranges, etc., built,	310
The number of heating apparatus set	472
The number of examinations that have been made	17,251
The number of notices issued	861
Estimated cost of completed brick buildings	\$1,490,100
Estimated cost of completed wooden and frame buildings	\$474,752
Estimated cost of completed additions, alterations, and repairs	\$1,327,230
The estimated cost of setting steam-boilers, engines, etc., building furnaces, ovens, ranges, etc.	\$202,188

The estimated cost of setting heating apparatus	\$85,674
The estimated cost of securing unsafe buildings, walls, etc.	\$10,997
The estimated cost of protecting elevator and hoist-way openings	\$290
The estimated cost of securing dangerous chimneys	\$4,020
The estimated cost of providing fire-escapes and additional means of egress	\$4,182
The estimated amount of damage to buildings by fire is	\$157,907

PERMITS ISSUED FOR BRICK, STONE, AND IRON BUILDINGS.

Banking institution	1
Bank, mercantile, and office	1
Boiler and engine-house	1
Boiler and dry-house	1
Boiler-houses	2
Car-house	1
Carpet storehouse	1
Carriage repository	1
Churches	3
Dwellings	154
Dwellings and stores	15
Dwelling and stable	1
Dry-houses	2
Family hotels	2
Ice-house	1
Kiln-house	1
Laundry	1
Lime-kiln	1
Manufacturing	10
Mechanical	12
Mercantile	33
Mercantile and storage	1
Offices	2
Public buildings	2
Railway stations	2
Scale-house and office	1
School-house and work-room	1
Stables	13
Storage	4
Stores and offices	2
Stores	6
Stores and storage	1
Storage of wagons and paint-shop	1
Tenement-houses	18
Tenement-houses and stores	8
Tenement-house and lager-beer bottling	1
Tank-house	1
Total	<hr/> 309

Exhibit "A" will give the statement in tabular form.

EXHIBIT A.

Showing the whole number of Brick Buildings in each Ward for which Permits have been issued.

PURPOSE OF BUILDING.	WARDS.																									Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Dwellings	1										97			8		1					9	3			35		154
Dwellings and Stores						7	1							2		2			1	1					1		15
Family Hotels											1							1									2
Tenement Houses						1					4	1				9	1					2					18
Tenement Houses and Stores						3						1	1			3											8
Mercantile						2				14		17															33
Manufacturing							1								1	1			2	1	1			1	1	1	10
Mechanical				1													11										12
Churches									1		1					1											3
Public Buildings													1											1			2
Railway Stations																											2
Stables					1				2		5			1					1	1	1				1		13
Storage						1				1							1			1							4
Stores and Offices										2																	2
Miscellaneous		2		1	5	1	1	1			1	2		2			2	1	3	6		1		3	1	2	31
Totals		3		2	2	15	3	1	3	17	109	22	2	13	1	17	15	3	7	10	10	6	5	40	3	309	

EXHIBIT B.

Showing the Styles of Roofs and the Number of Stories of the foregoing Buildings.

WARD.	NO. OF STORIES.						STYLE OF ROOF.					NO. OF BUILDINGS.
	1	2	3	4	5	6	Man-sard.	Flat.	Pitch.	Hip.	Other Styles.	
1 . . . . .	..	..	..	..	..	..	..	..	..	..	..	.. . . .
2	1	2	..	..	..	..	1	..	2	..	..	3
3 . . . . .	..	..	..	..	..	..	..	..	..	..	..	.. . . .
4	1	1	..	..	..	..	..	1	1	..	..	2
5 . . . . .	..	1	1	..	..	..	..	2	..	..	..	2
6	2	..	3	9	1	..	..	15	..	..	..	15
7	1	..	1	..	..	1	1	2	..	..	..	3
8	1	..	..	..	..	..	..	1	..	..	..	1
9	1	1	1	..	..	..	..	2	1	..	..	3
10	1	..	2	9	3	2	1	15	1	..	..	17
11	6	30	60	12	1	..	75	29	2	3	..	109
12	3	..	1	7	11	..	4	17	1	..	..	22
13 . . . . .	..	1	..	1	..	..	..	1	1	..	..	2
14	8	2	2	1	..	..	8	4	..	1	..	13
15 . . . . .	..	1	..	..	..	..	..	..	1	..	..	1
16 . . . . .	..	1	2	13	1	..	6	9	2	..	..	17
17	1	1	1	12	..	..	1	14	..	..	..	15
18	1	..	1	1	..	..	..	3	..	..	..	3
19	4	..	2	1	..	..	..	6	1	..	..	7
20	4	5	1	..	..	..	..	9	..	..	1	10
21 . . . . .	..	..	10	..	..	..	..	10	..	..	..	10
22	1	..	5	..	..	..	..	1	5	..	..	6
23	2	2	1	..	..	..	1	1	3	..	..	5
24	1	39	..	..	..	..	36	3	1	..	..	40
25	2	1	..	..	..	..	..	1	2	..	..	3
Totals	41	88	94	66	17	3	134	146	24	4	1	309

PERMITS ISSUED FOR WOODEN AND FRAME BUILDINGS.

Blacksmith-shops	5
Blacksmith and carpenter shop	1
Boat-house	1
Bonded warehouse	1
Bottling-house	1
Bowling-alley	1
Car-house	1
Carriage-houses	5
Carriage-house and storage	1
Carpenter-shops	3
Carpet-cleaning factory	1
Charitable institution	1
Churches	4
Coal-sheds	3
Coal-pockets	1
Cow-barn	1
Currying-shop	1
Dwellings	204
Dwellings and stores	7
Dwelling and restaurant	1
Dwelling and carriage-house	1
Dry-house	1
Dye-house	1
Elevators	2
Engine-house	1
Foundries	2
Freight-houses	5
Gate-house	1
Greenhouses	6
Horse-sheds	2
Horse-shed and storage for sleds	1
Ice-cream saloon	1
Ice-houses	3
Laundry	1
Lumber-sheds	3
Manufacturing	10
Mechanical	21
Milk-shed	1
Offices	6
Office and storage of wood and coal	1
Oil supply and conductor's room	1
Pavilions	2
Pavilion and stage (for theatrical purposes)	2
Pickling castings	1

Poultry-houses	5
Poultry-house and storage of wood	1
Primary school-houses	2
Pumping-station	1
Railway-stations	2
Railroad supply-house	1
Reading-rooms, etc.	1
Restaurants	2
Scale-house	1
Sheep-houses	2
Stables	63
Stables and carriage-houses	3
Stables and wagon-sheds	3
Stable and storage of junk	1
Stable, wagon, shed, and storage of lumber	1
Storage	59
Storage, bath-house, and repair-shop	1
Storage and carpenter's-shop	1
Stores	4
Stores and paint-shop	1
Store-house and wagon-shed	1
Stone-cutter's shed	1
Theatre	1
Wagon-sheds	11
Watch-houses	2
Wheelwright and paint-shop	1
Work-shop	1
Yard-master's house	1
<hr/>	
Total	494

Exhibit "C" will give the statement in tabular form.

EXHIBIT C.

Showing the whole Number of Wood and Frame Buildings in each Ward for which Permits have been issued.

PURPOSE OF BUILDING.	WARDS.																				TOTALS.
	1	2	3	4	5	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Dwellings	9	4	..	1	1	..	..	5	20	5	..	1	..	8	14	37	7	26	50	16	204
Dwellings and stores	1	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	1	1	1	..	7
Manufactories	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	5	..	1	10
Mechanical	1	2	..	..	..	..	..	4	..	1	..	..	..	..	..	1	2	3	3	4	21
Foundries	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2
Railway stations . . . . .	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2
Freight-houses . . . . .	..	4	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5
Coal-sheds . . . . .	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	3
Lumber-sheds . . . . .	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	3
Storage	7	4	..	5	1	..	1	7	2	2	1	3	..	1	2	2	..	9	9	3	59
Stables	1	5	..	..	..	..	..	..	..	2	..	1	..	2	2	6	1	14	20	9	63
Carriage-houses . . . . .	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	5
Wagon-sheds . . . . .	..	1	..	..	1	..	..	..	..	1	..	..	..	..	2	1	2	1	..	2	11
Churches . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	..	4
Miscellaneous	2	5	2	3	4	..	2	7	8	2	..	..	..	2	7	5	5	19	11	11	95
Totals	23	27	2	10	9	..	3	26	34	13	2	5	..	14	30	52	19	80	98	47	404

EXHIBIT D.

Showing the Styles of Roofs and the Number of Stories of the foregoing Buildings.

WARD.	No. of Stories.				STYLE OF ROOF.					No. of Buildings.
	1	2	3	4	Man.	Flat.	Pitch.	Hip.	Other Styles.	
1	16	6	1	...	3	5	15	...	...	23
2	20	5	2	...	1	10	16	...	...	27
3	1	1	...	...	...	2	...	...	...	2
4	7	2	1	...	...	7	3	...	...	10
5	2	5	1	1	...	8	1	...	...	9
12	3	...	...	...	...	1	2	...	...	3
13	14	6	6	...	...	12	12	1	1	26
14	21	11	2	...	10	9	15	...	...	34
15	10	3	...	...	4	3	5	1	...	13
16 . . . . .	...	...	2	...	...	2	...	...	...	2
17	1	3	1	...	...	5	...	...	...	5
19	11	2	1	...	2	2	10	...	...	14
20	18	11	1	...	3	9	11	1	...	30
21	15	36	1	...	8	6	35	2	1	52
22	9	5	5	...	...	11	6	2	...	19
23	46	30	4	...	4	17	57	2	...	80
24	48	49	1	...	8	5	75	9	1	98
25	27	18	2	...	7	4	35	1	...	47
Totals	269	193	31	1	50	118	304	19	3	494

They were erected in the following wards :—

Ward 6	.	.	.	.	.	.	.	.	1
“ 12	.	.	.	.	.	.	.	.	5
“ 16	.	.	.	.	.	.	.	.	2
“ 7	.	.	.	.	.	.	.	.	1
Total	.	.	.	.	.	.	.	.	9

STEAM-ENGINES, BOILERS, OVENS, AND FURNACES.

Under the provisions of Section 18 of Chapter 371 of the Acts of 1872, this department has supervision of the setting of all steam-boilers and heating apparatus, and the building of ovens, furnaces, etc.

The prosecution of this work does not, however, involve an inspection of the boilers, with a view to ascertain their condition and safety, and, though frequently called to act for that purpose, it has no legal authority.

STEAM-ENGINES, BOILERS, FURNACES, ETC.

The number of steam-boilers, engines, furnaces, etc., for which permits have been issued during the year, is as follows :—

STEAM-ENGINES AND BOILERS, ETC.

Steam-engines	.	.	.	.	.	.	.	13
Steam-boilers	.	.	.	.	.	.	.	114
Steam-boilers and engines	.	.	.	.	.	.	.	72
Sectional boiler	.	.	.	.	.	.	.	1
Hot-water boilers	.	.	.	.	.	.	.	3
Total	.	.	.	.	.	.	.	203

OVENS, RANGES, ETC.

Bakers' ovens	.	.	.	.	.	.	.	6
Baking “	.	.	.	.	.	.	.	2
Brick “	.	.	.	.	.	.	.	5
Japanning ovens	.	.	.	.	.	.	.	3
Oven	.	.	.	.	.	.	.	1
Brick range	.	.	.	.	.	.	.	1
Restaurant ranges	.	.	.	.	.	.	.	6
“ “ and broilers	.	.	.	.	.	.	.	6
“ “ “ boilers	.	.	.	.	.	.	.	2
Ranges	.	.	.	.	.	.	.	2
Total	.	.	.	.	.	.	.	34

KILNS, KETTLES, ETC.

Brick-kiln	1
Kilns	12
Kettles for melting type, etc.	2
Kettles for manufacturing of cement	2
“ “ mixing sugar	2
“ “ boiling “	1
Kettles	3
Sugar-melting pan	1
Coffee-roasters	12
Cupolas	4
Total	<hr/> 40

FURNACES, ETC.

Brass furnaces	27
Blacksmiths' furnaces	2
Brick furnaces	7
Iron “	6
Tailors “	2
Furnaces	2
Blacksmiths' forges	33
Brick forge	1
Wheelwright's forge	1
Forge	1
Total	<hr/> 82

HEATING APPARATUS.

Furnaces, and other heating apparatus	470
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ALTERATIONS, ADDITIONS, AND REPAIRS.

The number of buildings for which permits have been issued to have alterations made upon them, and to have additions built to them, is 2,294, classified as follows:—

Brick	917
Wood	1,365
Stone	11
Iron	1
Total	<hr/> 2,294

The estimated cost of alterations, repairs, and additions that were completed during the year is, \$1,327,230.

PROJECTING MORTARS AND LANTERNS.

The number of examinations that have been made upon petitions for leave to maintain mortars and lanterns to project over the sidewalk is as follows :—

Projecting mortars	4
Projecting lanterns	16
Lantern and mortar	1
	<hr/>
Total	21

PERMITS FOR THE OCCUPATION OF STREETS.

The number of permits that have been issued to occupy streets for building purposes is as follows :—

Permits in force January 1, 1880	505
Permits issued during the year	1,284
	<hr/>
Total	1,789
Permits cancelled during the year	585
Permits revoked	14
Permits in force December 31, 1880	1,190
	<hr/>
Total	1,789

FIRE AND ACCIDENT RECORD.

The number of buildings that have been reported as damaged by fire or accident is 352

The probable causes were as follows :—

Benzine in contact with lighted paper	1
Benzine, bottle of, falling on stove	1
Boiler overheated	1
Broilers overheated	2
Boiling blacking, overflow on range	1
Burning brand falling on cotton batting	1
Cause not ascertained	37
Children setting fire to clothing	2
Children setting fire to mattress on roof	1
Children setting fire to rubbish	1
Children playing with fire	1
Child setting fire to grass and paper in water-spout	1

Clothing in contact with stove-pipe	1
Clothing in contact with stove	1
Chimney-flue defective	6
Chimney-flue, woodwork near	3
Chimney-flue	1
Caught from adjoining building	64
Caught from adjoining lumber	3
Chemicals, spontaneous combustion of	1
Children's clothing, spontaneous combustion of	1
Chimney, sparks from, falling on roof	4
Cotton waste, spontaneous combustion of	1
Cotton, spontaneous combustion of	1
Furnace, improper setting of	1
Furnace overheated	1
Funnel-hole, improperly protected	1
Flame of lamp in contact with wood-work	1
Furnace smoke-pipe falling on lumber	1
Fireplace defective	2
Gale of wind	2
Gas, explosion of	1
Gas-jet in contact with window-curtain	1
Gas-jet in contact with lace curtain	2
Gas-jet in contact with drapery	1
Gasoline coppersmith's heater, explosion of	1
Grate, improper setting of	5
Hot ashes placed in barrel	2
Hot-air pipes, wood-work near	1
Hot ashes falling on floor	2
Hot coal falling on floor	2
Hot crucible set on hearth	1
Heat from boiler setting fire to wood-work	1
Hot pot from brass furnace set in a pan of charcoal	1
Incendiary	50
Kerosene oil lamp, breaking of	3
Kerosene oil lamp, explosion of	9
Kerosene oil lamp, upsetting of	1
Kerosene oil lamp, dropping of	2
Kerosene oil lamp, bursting of	2
Kerosene oil lamp, falling on stove	1
Kerosene oil lamp, heat of setting wood-work on fire,	1
Kerosene oil stove, explosion of	2
Kerosene oil stove, upsetting of	1
Kerosene oil, explosion of	1
Lighted match thrown into wooden spittoon	2
Lighted match thrown into hay	1
Lighted match in contact with waste rags	1
Lighted match in contact with excelsior	1

Lighted match thrown in rubbish	3
Lighted match dropped into clothing	1
Lighted match thrown on floor, in contact with partition	1
Lighted match falling on merchandise	1
Lighted cigar placed in clothing	1
Lighted cigar thrown on oily floor	1
Lighted lamp in contact with window-curtain	1
Lighted lamp in contact with floor	1
Lighted lamp in contact with clothing	1
Lighted candle in contact with wood-work	1
Lighted tobacco-pipe placed in coat-pocket	2
Lighted tobacco-pipe setting fire to bedclothing	1
Lighted fire-crackers falling on bureau	1
Lumber in contact with stove-pipe	1
Matches, children playing with	10
Matches, rats among	13
Matches thrown behind bureau	1
Matches, spontaneous combustion of	2
Naphtha igniting from spark from a man's boot-heel coming in contact with nail in floor	1
No thimble	1
No thimble-cover	1
Oak boards placed over register-box taking fire from heat of furnace	1
Overheated flat-iron heater	1
Oily waste, spontaneous combustion of	2
Oily rags, spontaneous combustion of	12
Oily saw-dust, spontaneous combustion of	1
Pitch, boiling over of a kettle of	1
Stove-pipe, overheated	1
Stoves, overheated	6
Stove-pipe in contact with wood-work	3
Stove, encased in wooden box, setting fire to same	1
Soot in chimney taking fire	3
Steam-boiler improperly set	1
Smoke-pipe not properly guarded	1
Soldering furnace, heat of, setting fire to charcoal	1
Soldering furnaces set on roof	2
Soft coal, spontaneous combustion of	1
Sparks from kettle falling on floor	1
Sparks from locomotive falling on roof	1
Sparks from locomotive setting fire to shavings	1
Sparks from steam-boiler falling on roof	1
Sparks falling on roof	1
Sparks from fire-box	1
Sparks from hoisting-machine	1

Sparks from hemp-picking machine	1
Sparks from tobacco-pipe setting fire to hay . .	1
Sparks from furnace setting fire to inside of roof .	2
Sparks from furnace setting fire to wood-work . .	1
Sparks from blacksmith's furnace falling on roof .	1
Sparks from sky-rocket falling on roof	2
Telegraph wires, in contact with combustible material	1
Vapor of flavoring extracts, in contact with gas-jet .	1
Wood-work in contact with range	1
Wooden box placed too near stove	1
Wood in oven igniting from heat	1
Wood-work, smoke-pipe near	1
Yachting materials, spontaneous combustion of . .	1

 352

HOIST-WAYS AND ELEVATORS.

The attention of this department has, to a considerable extent, necessarily been directed to the inspection of hoist-ways and elevators. The large increase in their number since the fire of 1872, the increased height of buildings now being erected, the introduction of elevators into classes of buildings heretofore not generally provided with them, such as hotels, family hotels, operative and public buildings, and the especial danger from accident, and the extension of fire in their use, indicate that more than ordinary attention should be given them.

The requirements are few and simple: a railing, trap-doors, and trap-doors closed, except when in actual use by the occupants of the building. It was supposed at the time of the passage of the act governing hoist-ways and elevators that its provisions would cover all cases that would arise; but that expectation has not been wholly realized, non-compliance often arising from ignorance, negligence, or design, according to the character of the individual.

"There are few provisions of the building law more important than this one. When it is considered that, for protective purposes in case of fire, the floors of our buildings are so constructed as to make only an apparent separation of the stories, and that with a large flue extending from the basement of a building to the roof, and the building stored with large amounts of combustible material, it becomes especially dangerous in case of a fire occurring in it, which, instead of being temporarily confined to the story in which it originated, spreads at once throughout the building, imperilling, to a greater or less extent, all surrounding buildings;

and when the number of firemen whose lives have been lost, or who have been seriously injured by entering these or adjoining buildings having unprotected hoist-ways, is also considered, the simple requirements of rails and of closed trap-doors during non-business hours are not to be considered onerous or burdensome, and any neglect to make them conform to legal requirements no excuse for an exemption from the prescribed penalty."

In view, then, of their rapid and general introduction into various classes of buildings, and the unsafe consequences thereto attendant from those not properly protected, appropriate additional legislation in the matter of their regulation seems imperative.

The total number of examinations that have been made is 157

Classified as follows :—

Hoist-way and elevator openings unprovided with trap-doors	57
Hoist-way and elevator openings unprovided with a railing	93
Trap-doors left open when not in actual use	7
Total	157

VIOLATIONS OF THE BUILDING LAW PLACED ON FILE FOR PROSECUTION.

Building No. 31 Barrett street.—The complaint was for leaving trap-doors to hoist-way open at 9.30, P.M., and when not in actual use. The case was settled upon payment of fine.

Building No. 41 India wharf.—The complaint was for leaving trap-doors open at 9.30, P.M., and when not in actual use. The case was settled upon payment of the usual fine.

Building Nos. 9 and 11 John street.—The complaint was for leaving trap-doors open, when not in actual use—8.30, P.M. Case settled on payment of fine.

Building No. 72 High street.—The complaint was for trap-doors having been found open at 10.30, P.M., when not in actual use. The case was settled on payment of the usual fine.

Building No. 200 State street.—Complaint was for leav-

ing trap-doors open on second floor at 9.30, P.M., when not in actual use. Case settled by fine.

Building No. 100 Pearl street. — The complaint was for leaving trap-doors open at 9.30, P.M., when not in actual use. Case settled by fine.

Building No. 42 Summer street. — The complaint was for leaving trap-doors open at 8.30, P.M., and when not in actual use. The case was settled on payment of the usual fine.

MEANS OF EGRESS AND FIRE-ESCAPE.

Under the provisions of the building-law, fire-escapes and sufficient means of egress are required in the following classes of buildings : —

Buildings in which operatives are employed in any of the stories above the second story.

Buildings occupied by two or more families on any floor above the second floor from the level of the street.

Hotels, boarding and lodging houses, factories, mill or manufactory.

Buildings occupied in part, or in whole, for any public purpose.

All new buildings belonging to any of the above classes are especially examined in regard to their construction, with reference to fulfilling legal requirements in furnishing suitable and ample means of egress in case of fire or accident.

The number, location, arrangement, and width of the stairways ; the proposed number of occupants or operatives ; the proposed use of the building ; its proximity to other buildings, and the materials of which it is built, — all enter into consideration.

Old buildings altered to, or by occupancy brought to, be comprised in any of the above classes of buildings requiring fire-escapes, are also duly inspected, and the necessary means of escape are required, the same as if it was a new building.

Requisitions for fire-escapes have been made upon the following classes of buildings : —

Tenement-houses	68
Buildings in which operatives are employed	28
Dwellings	5
Hotels	3
Boarding-houses	3
Public halls	2
Church	1
Charitable institution	1
Dwelling and lodging-house	1

Lodging-house	.	.	.	.	.	.	.	1
Public building	.	.	.	.	.	.	.	1
Offices	.	.	.	.	.	.	.	1
Total	.	.	.	.	.	.	.	<hr/>115

Requisitions on these buildings have been made as follows:—

Balcony and step-ladder fire-escapes	.	.	.	.	.	.	64
Iron balconies	.	.	.	.	.	.	28
Additional stairways	.	.	.	.	.	.	7
Bridges	.	.	.	.	.	.	9
Step-ladders to scuttles in roofs	.	.	.	.	.	.	5
Outside step-ladders to roof	.	.	.	.	.	.	2
Window openings to be cut	.	.	.	.	.	.	5
Stairways extended to roof	.	.	.	.	.	.	4
Doors made to open outward	.	.	.	.	.	.	6
Doors required to be left open	.	.	.	.	.	.	3
Obstructions to be removed from stairways	.	.	.	.	.	.	3
Doorway in partition	.	.	.	.	.	.	1
Remove door and partition at head of stairway	.	.	.	.	.	.	1
Balcony	.	.	.	.	.	.	1
Remove pulley-belt from step-ladder	.	.	.	.	.	.	1
Window made to open outward	.	.	.	.	.	.	1
Secure steps leading to roof	.	.	.	.	.	.	1
Remove floor over stairway	.	.	.	.	.	.	1
Extend stairway	.	.	.	.	.	.	1
Provide an axe for use in case of fire, to be kept at head of stairway	.	.	.	.	.	.	1
Total	.	.	.	.	.	.	<hr/>145

THE INSPECTION OF BUILDINGS.

The number of violations that have been investigated and reported on is 507.

This number does not include numerous violations that were removed on verbal notification, but those only that from any cause it became necessary to take official action.

The following statement exhibits the nature of these violations:—

Violations of the statutes	.	.	.	.	.	.	476
“ “ ordinances	.	.	.	.	.	.	91
Total	.	.	.	.	.	.	<hr/>507

Bay-windows projecting over line of street	3
Cellar bottom below grade	2
Cellars not concreted	2
Cornice not covered with iron	1
Chimney not plastered	1
Defective foundation	1
Exceeding range	4
External combustible covering	1
Fire-escape, none	115
Flues not plastered	2
Flues, wood-work against	10
Framing improper	7
Grate improperly set	1
Headers not hung in stirrup-irons	1
Hot-air pipes, wood-work against	6
Improper construction	20
Lintels, wooden	17
Material, poor	15
Metallic leaders not connected with sewer or drain	2
Nails driven into chimney	1
No foundation	1
“ girts	1
“ iron shutters	25
“ metal-covered doors	7
“ permit	69
“ rails	93
“ rebated iron frames	6
“ traps	57
Piles cut above grade five	1
“ too far apart	1
Porch projecting over line of street	1
Registers improperly set	2
Scuttles and ladders, none	4
Timbers, small-sized	3
“ not anchored	10
Trap-doors left open	4
Violation of conditions of street permit	2
Walls not thick enough	3
“ “ through roof	2
“ “ anchored	1
Wooden building in limits	2
Total	507

The department has record of the following accidents that occurred during the year :—

Jan. 5, Patrick Anderson, an employé of E. B. Badger & Son, while at work securing iron-work on the roof of building No. 182 Commonwealth avenue, the roof-staging gave way, precipitating him to the ground, sustained serious, though not fatal, injuries.

Francis P. Mahan, member of Hook and Ladder Co. No. 8, while in the performance of his duty as fireman fell through hoist-way in second floor of building situated No. 31 Barrett street, the adjoining building being on fire at the time. Said Mahan fortunately escaped injury. The hoist-way was not protected by trap-doors and rails.

March 22, one of the passenger elevator cars in Jordan, Marsh, & Co.'s dry goods store, Nos. 450-456 Washington street, run down unawares about twenty-two feet, from a point about nine feet above the second floor; in its descent brought up against rubber bumpers at bottom of shaft. There were fourteen persons in the elevator-car at the time of accident, who escaped without injury.

Samuel Bateman, an employé of the Boston Excelsior Co., No. 25 Merrimac street, while in the discharge of his duty, together with other workmen, hoisting bales of excelsior from the first to the sixth floor, through hoist-way. Said Bateman was on the lower or street floor, when, by some unknown cause, the iron weight used on check, or clamp of drum, fell from its fastenings through the several openings in floors, striking him on the head, killing him instantly.

The hoist-way openings were not protected according to law.

Mr. Frederick McIntosh, 39 years old, an employé of the Howard Watch & Clock Co., on Eustis street, corner Prescott street, met his death by falling through elevator-way from the third to the basement floor, probably the result of carelessness. The elevator openings on the third and fourth floors, at time of examination, were not protected by rails.

Mr. George Zeigler, 50 years old, an employé of Lang & King, brewers, Longwood avenue, at which place said Zeigler was at work, loading goods from outside elevator to wagon. From some cause or other, the elevator commenced to descend, while he had one foot on same, causing him to fall over on top of a half barrel of beer, that was on the elevator platform. He was injured internally; not fatal.

Timothy Sweeney, 30 years old, while in building No. 470 Harrison avenue, attempted to ascend from the first to second story, by hoist rope in hoist-way, and when near the second floor he fell to cellar, a distance of about seventeen feet, fracturing two of his ribs, from which he will recover.

The hoist-way was protected according to law.

Charles Demyer and Hugh McCrystal, each aged 18, employés of Roxbury Carpet Co., on Hampshire street, corner Clay street, met with an accident in elevator-way of said building, by the breaking of cogs or gearing at sides. Said Demyer had one leg broken, and McCrystal slightly bruised. The accident was the result of carelessness, and could have been avoided.

Elevator is enclosed in brick, and door-ways protected by rails.

Mr. H. S. Keyes, an employé of A. B. Shaw, in building Nos. 9, 11, 13 Chardon street, while on elevator ascending; when opposite fourth floor the wire-rope parted, allowing the elevator and occupant to fall through several floors to the basement, injuring said Keyes so that he had to be conveyed to the Massachusetts General Hospital; as a result serious, though not fatal, injuries.

Elevator enclosed in metal-lined shafts, door-ways protected by rails.

Miss Nellie Conroy met with a fatal accident while employed in the store of Houghton & Dutton, No. 55 Tremont street. The duty of Miss Conroy, together with other girls, was to deliver and receive bundles from dumb-waiter. These dumb-waiters were worked on the principle of a balance, one waiter ascending while the other descends. Miss Conroy was in the act of looking into slide to ascertain, as supposed, the position of waiter; at that moment the dumb-waiter in its descent struck her on the head, from the effects of which she died.

Austin L. Crain, 19 years old, residing in Arlington, an employé of Emery Bemis, 33 Central wharf, while on the third floor of said building, examining and delivering goods at hoist-way, stepped backward, and fell through said hoist-way to the first or street floor. He was seriously, though not fatally, injured, and was taken to the Massachusetts General Hospital.

Edward Johnson, a young man, and stranger in the city, while in the act of getting on elevator (in building Nos. 27-29 Winter street) while it was in motion, slipped and fell, and was crushed between elevator and floor. He survived his injuries but one hour. The elevator was in good repair.

Geo. K. Withington, baker, was injured by the explosion of a bread-kneader in building No. 224 Ruggles street. The result may prove fatal, as Mr. W. has not regained consciousness.

Mr. David J. Buckley, an employé of the Hancock Inspirator Manufacturing Co., Nos. 28 to 32 Beach street, met with a painful accident, which may prove fatal. Said

Buckley, while on the fourth floor, fell through elevator-way to cellar, from some unexplained cause.

This elevator is enclosed in each story; the doors leading to elevator were not protected by rails.

UNSAFE BUILDINGS.

The total number of unsafe buildings, unsafe walls, etc., on which the department has taken action, is one hundred and fifty-three; classified as follows:—

Unsafe buildings	.	.	.	.	.	.	36
“ bricks on roof	.	.	.	.	.	.	1
“ clothes-shed	.	.	.	.	.	.	14
“ coping	.	.	.	.	.	.	1
“ cornices	.	.	.	.	.	.	3
“ corridor	.	.	.	.	.	.	1
“ corbel	.	.	.	.	.	.	1
“ conductors	.	.	.	.	.	.	4
“ coving	.	.	.	.	.	.	1
“ ells	.	.	.	.	.	.	2
“ fence	.	.	.	.	.	.	1
“ floors	.	.	.	.	.	.	4
“ foundations	.	.	.	.	.	.	6
“ gutters	.	.	.	.	.	.	2
“ hoist-way and elevator ropes	.	.	.	.	.	.	2
“ observation stand	.	.	.	.	.	.	1
“ piers	.	.	.	.	.	.	2
“ plank on roof	.	.	.	.	.	.	1
“ railing	.	.	.	.	.	.	1
“ roofs	.	.	.	.	.	.	2
“ signboard	.	.	.	.	.	.	1
“ slate on roof	.	.	.	.	.	.	2
“ spire	.	.	.	.	.	.	1
“ stair-ways	.	.	.	.	.	.	2
“ stair trimmers	.	.	.	.	.	.	2
“ stagings	.	.	.	.	.	.	2
“ steps	.	.	.	.	.	.	1
“ stud partition	.	.	.	.	.	.	1
“ towers	.	.	.	.	.	.	4
“ walls	.	.	.	.	.	.	51
Total	.	.	.	.	.	.	153
Unsafe heating apparatus	.	.	.	.	.	.	88
“ dangerous chimneys	.	.	.	.	.	.	249
“ defective flues	.	.	.	.	.	.	25
							<hr/> 362
Grand total	.	.	.	.	.	.	<hr/>515

The following Table shows the Number of Unsafe Buildings reported on as rebuilt, secured, etc.

	Rebuilt.	Secured.	Taken down.	Not Completed.	Total.
Unsafe buildings		6	16	14	36
“ bricks on roof				1	1
“ clothes-sheds		2		12	14
“ coping		1			1
“ cornices		2		1	3
“ corridor		1			1
“ corbel		1			1
“ conductors	1	3			4
“ coving		1			1
“ ells		1		1	2
“ fences				1	1
“ floors		4			4
“ foundations	1	3		2	6
“ hoist-way elevator ropes		1			1
“ observation stand				1	1
“ passenger elevator ropes				1	1
“ gutters				2	2
“ piers				2	2
“ plank on roof			1		1
“ railing		1			1
“ roofs		1		1	2
“ signboard				1	1
“ slate on roof		1		1	2
“ spire				1	1
“ stair-ways		2			2
“ stair trimmers		2			2
“ stagings			1	1	2
“ steps				1	1
“ stud partition		1			1
“ towers		4			4
“ walls	7	15	3	26	51
“ heating apparatus		32	1	74	107
Defective flues	3	12	1	9	25
Dangerous chimneys	116	22		111	249
Total	128	100	23	264	515

EXAMINATIONS.

The daily outside work of the department consists in the inspection of buildings reported to be in an unsafe condition from any cause whatever ; deficiency in the means of egress or fire-escapes upon buildings required by law to be provided with them ; the supervision of the erection of new buildings and the enlargement of old ones, with reference to provision for public safety and conformity to the requirements of the building law. Examinations were made of 200 observation stands on the occasion of the 250th Anniversary of the Settlement of Boston.

COMPLETED BUILDINGS.

The total number of brick and stone buildings completed during the year is one hundred and fifty-nine, at an estimated cost of one million four hundred ninety thousand one hundred dollars.

The total number of wood and frame buildings completed during the year is two hundred and seventy-three, at an estimated cost of four hundred seventy-four thousand seven hundred fifty-two dollars.

The estimated cost of completed additions, alterations, and repairs is one million three hundred twenty-seven thousand two hundred and thirty dollars.

SUMMARY OF THE WORK OF THE DEPARTMENT FROM ITS ORGANIZATION.

The department commenced operations October 2, 1871, and in order to indicate, in some degree, the amount of work that it has accomplished, I submit a statement of its operations from that period to the present time.

The following tables show a comparative statement of the workings of the department from its organization :—

Showing the Number of Permits that have been issued for New Buildings, for Alterations, Steam Engines, etc.; the Number of Unsafe Buildings, Unsafe Heating Apparatus, etc., reported; the Number of Buildings that have been examined for Fire-Escapes, and the Number of Requisitions, etc., that have been issued, 1871-1880.

	Permits issued. Brick.	Permits issued. Wood.	Special Permits issued.	Permits issued. Alterations.	Permits issued to set Steam Boilers and Engines. Permits issued to set Fur- naces, Ovens, etc.	Notices on Heating Ap- paratus received.	No. of Build- ings exam- ined for Fire- Escapes.	No. of Street Permits issued.	Projecting Signs exam- ined.	Halls examined for Exhibi- tions.
1871.	245	272		205						
1872.	974	1,051	21	841						
1873.	646	903	30	1,303	71	97	540			
1874.	520	1,278	23	2,052	100	87	103			
1875.	348	709	11	1,836	70	91	71			
1876.	200	532	17	1,936	124	257	181		15	26
1877.	265	532	13	2,343	181	481	2,869	263	21	4
1878.	187	473	23	2,191	215	346	1,173	1,100	27	
1879.	203	575	44	2,567	309	440	143	1,311	17	
1880.	309	494	9	2,294	359	470	551	1,284	21	1
Total	3,897	6,819	191	17,503	1,429	2,269	5,631	3,958	101	31

	No. of Build- ings Damaged by Fire exam- ined.	No. of Unsafe Buildings, Walls, etc.	No. of Danger- ous Chimneys reported.	Unsafe Heating Apparatus, etc., reported.	No. of Defective Flues re- ported.	No. of Hoist- ways and Elevators examined.	No. of Regu- lations for Fire- Escapes is- sued.	No. of Unsafe Boilers, Fur- naces, etc., reported.	No. of Viola- tions re- corded.	Cases referred to City Solicitor.	No. of Exam- inations made.	No. of Notices issued.
1871	71	31	78	10	. . . .	. . . .	. . . .	. . . .	132	2	. . . .	. . . .
1872	216	61	46	8	8	. . . .	. . . .	3	387	. . . .	. . . .	. . . .
1873	314	139	522	16	7	15	269	. . . .	1,101	17	. . . .	. . . .
1874	351	149	417	4	13	21	36	. . . .	891	5	. . . .	. . . .
1875	308	99	386	8	10	162	17	. . . .	346	8	23,862	. . . .
1876	291	77	374	32	7	223	62	43	452	30	23,526	852
1877	349	220	388	126	139	145	287	. . . .	833	9	22,316	989
1878	323	230	505	96	42	324	275	10	1,074	8	19,470	1,415
1879	510	183	1,042	34	28	983	125	23	1,675	9	21,075	1,857
1880	352	153	249	88	25	96	115	21	507	9	17,051	861
Total	3,085	1,342	4,007	422	279	1,969	1,186	100	7,398	97	127,300	5,974

Showing the Number of New Buildings, etc., completed under the Supervision of the Department since its Organization, together with the Estimated Cost.

	NEW BUILDINGS.		ALTERATIONS.		UNSAFE BUILDINGS.		DANGEROUS CHIMNEYS.		STEAM ENGINES, OVENS, AND FURNACES.		HEATING APPARATUS.		HOIST-WAYS AND ELEVATORS.		TOTAL.	
	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.
1871-5.	5,711	\$55,536,673	6,362	\$4,454,018	472	\$50,200	1,407	\$19,884	257	\$36,500	240	\$12,500	138	\$8,600	14,587	\$60,118,375
1876.	879	6,727,130	1,785	1,335,446	60	15,780	425	6,948	235	32,270	200	9,220	68	3,518	3,652	8,130,312
1877.	697	5,332,365	2,165	1,114,290	168	18,816	331	5,019	286	137,115	505	68,736	50	3,750	4,205	6,680,091
1878.	631	3,447,655	1,958	852,333	230	37,684	505	6,900	215	134,337	346	56,712	52	2,647	3,937	4,538,268
1879.	...	...	2,397	1,606,768	183	20,151	1,042	13,989	309	97,099	440	66,357	177	4,187	4,548	1,808,551
1880.	432	1,964,852	2,198	1,327,230	108	10,997	288	4,020	310	202,188	472	85,674	45	290	3,853	3,595,251
Total.	8,350	\$73,008,675	16,865	\$10,690,085	1,221	\$153,628	3,998	\$56,760	1,692	\$639,509	2,203	\$299,199	530	\$22,992	34,782	\$84,870,848

Showing the Number of Buildings damaged by Fire, together with an estimated Amount of Damage since its Organization.

	No. Buildings.	Amount Damage.
1871	71	\$61,105
1872	216	13,510,569
1873	314	812,195
1874	351	590,720
1875	308	223,906
1876	291	176,654
1877	349	113,727
1878	323	229,640
1879	510	354,311
1880	352	157,907

NOTICES ISSUED.

Notices relating to construction; violations of the building law	507
Unsafe boilers, furnaces, etc.	88
Dangerous chimneys and flues	274
Fire-escape requisitions	115
Unsafe building notices	36
Stables	99
Total	1,119

